OIPE JC181
JUN 1 8 2001
PATENT & TRADEMARK OFFICE

#3

SEQUENCE LISTING

<110> Lawrence, Papsidero
Lyn, Dyster
Jana, Frustaci

<120> Detection and Treatment of Breast Cancer

<130> 3380/1I127-US4

<140> 09/834,794
<141> 2001-04-13

<150> 09/146,580
<151> 1998-09-03

<150> 60/071,899
<151> 1998-01-20

<150> 60/092,155
<151> 1998-07-09

<160> 35

<170> PatentIn version 3.0

<210> 1
<211> 127
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (70)..(70)
<223> Xaa at position 70 is either Arg or Gly

<220>
<221> UNSURE
<222> (91)..(91)
<223> Xaa at position 91 is either Lys or Asn

<400> 1

Met Gln Gln Arg Gly Leu Ala Ile Val Ala Leu Ala Val Cys Ala Ala
1 5 10 15

Leu His Ala Ser Glu Ala Ile Leu Pro Ile Ala Ser Ser Cys Cys Thr
20 25 30

#3

```
Glu Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn Met
        35                  40                  45

Cys Arg Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
    50                  55                  60

Leu His Val Lys Arg Xaa Arg Ile Cys Val Ser Pro His Asn His Thr
65                  70                  75                  80

Val Lys Gln Trp Met Lys Val Gln Ala Ala Xaa Lys Asn Gly Lys Gly
                85                  90                  95

Asn Val Cys His Arg Lys Lys His His Gly Lys Arg Asn Ser Asn Arg
            100                 105                 110

Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys Thr Pro Tyr
        115                 120                 125

<210>  2
<211>  104
<212>  PRT
<213>  Homo sapiens

<220>
<221>  UNSURE
<222>  (47)..(47)
<223>  Xaa at position 47 is either Arg or Gly

<220>
<221>  UNSURE
<222>  (68)..(68)
<223>  Xaa at position 68 is either Lys or Asn

<400>  2

Leu Pro Ile Ala Ser Ser Cys Cys Thr Glu Val Ser His His Ile Ser
1               5                   10                  15

Arg Arg Leu Leu Glu Arg Val Asn Met Cys Arg Ile Gln Arg Ala Asp
            20                  25                  30

Gly Asp Cys Asp Leu Ala Ala Val Ile Leu His Val Lys Arg Xaa Arg
        35                  40                  45

Ile Cys Val Ser Pro His Asn His Thr Val Lys Gln Trp Met Lys Val
    50                  55                  60

Gln Ala Ala Xaa Lys Asn Gly Lys Gly Asn Val Cys His Arg Lys Lys
```

Seq ID #3

Seq ID #4

#5

65 70 75 80

His His Gly Lys Arg Asn Ser Asn Arg Ala His Gln Gly Lys His Glu
85 90 95

Thr Tyr Gly His Lys Thr Pro Tyr
100

<210> 3
<211> 18
<212> PRT
<213> Homo sapiens

<400> 3

Thr Glu Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn
1 5 10 15

Met Cys

<210> 4
<211> 16
<212> PRT
<213> Homo sapiens

<400> 4

Lys Asn Gly Lys Gly Asn Val Cys His Arg Lys Lys His His Gly Lys
1 5 10 15

<210> 5
<211> 19
<212> PRT
<213> Homo sapiens

<400> 5

Asn Ser Asn Arg Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys
1 5 10 15

Thr Pro Tyr

<210> 6
<211> 3117
<212> DNA
<213> Homo sapiens

<220>

<221> unsure
<222> (1)..(3117)
<223> n at any position in the sequence represents a or g or c or t/u

<220>
<221> unsure
<222> (1)..(3117)
<223> y at any position in the sequence represents t/u or c

<220>
<221> unsure
<222> (1)..(3117)
<223> m at any position in the sequence represents a or c

<220>
<221> unsure
<222> (1)..(3117)
<223> k at any position in the sequence represents g or t/u

<220>
<221> unsure
<222> (1)..(3117)
<223> s at any position in the sequence represents g or c

<220>
<221> unsure
<222> (1)..(3117)
<223> w at any position in the sequence represents a or t/u

<220>
<221> unsure
<222> (1)..(3117)
<223> r at any position in the sequence represents g or a

<400> 6

aacatcctca cttgtgttgc tgtcagtgcc tgtanggcag gcaggaatgc agcagagagg 60

actcgccatc gtggccttgg ctgtctgtgc ggccctacat gcctcagaag ccatacttcc 120

cattgcctcc agctgttgca cggaggtttc acatcatatt tccagaaggc tcctggaaag 180

agtgaatatg tgtcgcatcc agagagctga tggggattgt gacttggctg ctgtcatcct 240

tcatgtcaag cgcngaagaa tctgtgtcag cccgcacaac catactgtta agcagtggat 300

gaaagtgcaa gctgccaana aaaatggtaa aggaaatgtt tgccacagga agaaacacca 360

tggcaagagg aacagtaaca gggcacatca ggggaaacac gaaacatacg gccataaaac 420

tccttattag agaatctaca gataaatcta cagagacaat cccccaagtg gacttggcca 480

tgattggttg taagtttatc atctgaattc tccttattgt agacaacaga acaaaacaaa 540

atattggttt ttaaaaaatg aacaattgtg ccgtatgcaa atgtacccaa taatatactc 600

cactggaaaa tgaaatgaaa aaannatact ggctgggtat ggtgggtccc ccttttatc 660

ccannnnctt cgggaggcag aggcaggagg atcacttgag accaggantt ngagacnagc 720

tnggggcaaa anagcaanga cntcatttnt acaaacnaaa aaaaanttg gcccggcntg 780

gtagnacttg cntataatcc cagcnacatg ggaggtngag gtgggaggat cacttgagtc 840

tgggngagtt ngaggtngca gtgagcagcn tgggtgacag aatgnagacc ntgtctctaa 900

aaataataat aataatgata gtgtatatct tcatataata ttttaagnag gagcatatag 960

atataacttn ctcccaactt tttaattata gttttccaaa cttacagaga agttaaaaga 1020

atggtacaat gaacatctat atatctttca ccacaatatt aatcattgtt aatattgtgc 1080

cacatttgct ttctctctcc tctcttggta ggggttncaa tataaaatat tataactttt 1140

aaaatatatc ttgttttgct aaccattgga aaataagttg caaaaatcat gacacttcac 1200

ccctagtttc ttttnggtgt tataacttga cataccctaa aataaagaca tttttctaca 1260

taatcacctt atcagtttta tacctaaaaa attaataatt tcatctaata tattccatat 1320

tcaaattttc ccaactattt agagagcatt ttatgtagtt ttttttcac tccagtaatc 1380

aatcaaggtn gacatacata ttgcaaataa ttgttatttt tctttaatat ctttcaatct 1440

aagaaagttc ctctgtcttt ttttttaat ttttaaaatt attttgttga gggagggtct 1500

tgctgtgtct tccaggctgg agtgcagtgg cacaattttg attttggctc actgaagcct 1560

caactttagg gctcaagcaa tcctcccacc tcagcctncc cgagtatctg ggatcaaggt 1620

gcatacccac cacacctggc taattttgtt tattttttgt agagacaggg tctcactatg 1680

ttgcccaggt tgatctcaaa ctcctgggct caagcgatcc tcccacctta gcctcccaaa 1740

gtactgggat tataggtgtg agccacagtg cctggcctaa ttattttctt gtgatcaaat 1800

tcaggtttaa tgtttttggt taagaatttc ctacgtgaat tcgtgtactt attttgtcat 1860

ttagagttca taaatattag ggtttatttt ctaaatagaa tagtttaaac taaatataac 1920

ttcaaaacgt ctagtttgag tagctaccgt tgtttggatt gaaattttct gatactgaaa 1980

agaacaaaaa gcctgccttt ctgcccanaa csnnttgcyt cccccagtna gttcttggng 2040

cagnactagt tagggnccca gagttnggcc ttnngkgtgg tgattttang ytctgcctaa 2100

acaaggngcn wacatytttt agctcctatt ccaccyttct namamgtttt tgttgtkgtt 2160

tgnttgtttt tttkgagaca grrtntnayt ctgtttgccc argctggart tgcagtggca 2220

caatytnggy tncattgcaa cytcngcytc cssgccgttc aaktgatyyt cttgcytcag 2280

cytccccaag taantgatat tacaggngcc cagccaccam accccgntga wttttgtatt 2340

tttartarar amrgggtttt cccgcnttgg cngggctggt ctcnaantcc ttgamctcna 2400

ktgaaccacc cgcctgtgcc ycccaaantg ctggaattac cancgttgan ccaccatgcc 2460

gggcycacac gtttgarttt ganaccattg tnccattcct cttttggcct yttttttntc 2520

catagnngct tcaagataga tangtaagrg cccagtagtn gttcwtarga agcnmatagr 2580

rancrggarc cantttnatc aggtgggcag gtgtccnngg cytccctgct ggytnntccc 2640

aagcggtggt gttgccarga nktnttggar gtgataatgg gananaccag naggcmctga 2700

gtyncnntag gttnaaatgc caccaaaact ggcctttggc ctaatatccy ycnttgamta 2760

nttarcattt awtttattwa tttncctgac atttntgcma ncctttgtwt ttntatttcc 2820

nctntatara wgargaaatt tgaggntytt araggtaaaa tganttgcnc nrgtnnacmc 2880

aggaagtggc nraranaanc tttttanatn mgaaaaaatt aataaaatat aatatgagag 2940

taacttaaaa tattaataaa ccacaatttt aaattaatta accgtgataa ccaacattaa 3000

taaaagttaa gataccaaaa cactggtgtn taattttttn aactaacaan ttgaattatt 3060

ttccatttta aattaattaa ccgtgataac caacattaat aaaagttaag ataccgn 3117

<210> 7
<211> 381
<212> NA

<213>   Homo sapiens

<220>
<221>   unsure
<222>   (208)..(208)
<223>   n may represent a or g or c or t/u

<220>
<221>   unsure
<222>   (273)..(273)
<223>   n may represent a or g or c or t/u

<400>   7
atgcagcaga gaggactcgc catcgtggcc ttggctgtct gtgcggccct acatgcctca   60

gaagccatac ttcccattgc ctccagctgt tgcacggagg tttcacatca tatttccaga   120

aggctcctgg aaagagtgaa tatgtgtcgc atccagagag ctgatgggga ttgtgacttg   180

gctgctgtca tccttcatgt caagcgcnga agaatctgtg tcagcccgca caaccatact   240

gttaagcagt ggatgaaagt gcaagctgcc aanaaaaatg gtaaaggaaa tgtttgccac   300

aggaagaaac accatggcaa gaggaacagt aacagggcac atcaggggaa acacgaaaca   360

tacggccata aaactcctta t   381

<210>   8
<211>   104
<212>   DNA
<213>   Homo sapiens

<400>   8
acacgaattc acgtaggaaa ttcttaacca aaaacattaa acctgaattt gatcacaaga   60

aaataattag gccaggcact gtggctcaca cctataatcc cagt   104

<210>   9
<211>   25
<212>   DNA
<213>   Homo sapiens

<400>   9
gaattcacgt aggaaattct taacc   25

<210> 10
<211> 22
<212> DNA
<213> Homo sapiens

<400> 10
actgggatta taggtgtgag cc 22

<210> 11
<211> 311
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (101)..(101)
<223> n may be a or g or c or t/u

<220>
<221> unsure
<222> (162)..(162)
<223> n may be a or g or c or t/u

<400> 11
ggagagagcc gtatgtttcg tgtttcccct gatgtgccct gttactgttc ctcttgccat 60

ggtgtttctt cctgtggcaa acatttcctt taccattttt nttggcagct tgcactttca 120

tccactgctt aacagtatgg ttgtgcgggc tgacacagat tnttctgcgc ttgacatgaa 180

ggatgacagc agccaagtca caatccccat cagctctctg gatgcgacac atattcactc 240

tttccaggag ccttctggaa atatgatgtg aaacctccgt gcaacagctg gaggcaatgg 300

gaagtatggc t 311

<210> 12
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Sequencing primer T7

<400> 12
taatacgact cactataggg 20

<210> 13
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> pCR3.1 Reverse Primer

<400> 13
tagaaggcac agtcgagg 18

<210> 14
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Gene specific primer (24R)

<400> 14
actgggatta taggtgtgag cc 22

<210> 15
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Gene specific primer (24R2)

<400> 15
caaattcagg tttaatgttt ttgg 24

<210> 16
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Gene specific primer (F4)

<400> 16
ctcaaacgtg tgagcccggc a 21

<210> 17

<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> Gene specific primer (F3)

<400> 17
gctactcaaa ctagacgttt tgaag 25

<210> 18
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> primers F8

<400> 18
ccgtatgttt cgtgtttccc ctga 24

<210> 19
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Primer R5

<400> 19
agccatactt cccattgcct ccag 24

<210> 20
<211> 150
<212> PRT
<213> Homo sapiens

<400> 20

```
Met Asn Leu Trp Leu Leu Ala Cys Leu Val Ala Gly Phe Leu Gly Ala
1               5                   10                  15

Trp Ala Pro Ala Val His Thr Gln Gly Val Phe Glu Asp Cys Cys Leu
            20                  25                  30

Ala Tyr His Tyr Pro Ile Gly Trp Ala Val Leu Arg Arg Ala Trp Thr
        35                  40                  45
```

Tyr Arg Ile Gln Glu Val Ser Gly Ser Cys Asn Leu Pro Ala Ala Ile
50 55 60

Phe Tyr Leu Pro Lys Arg His Arg Lys Val Cys Gly Asn Pro Lys Ser
65 70 75 80

Arg Glu Val Gln Arg Ala Met Lys Leu Leu Asp Ala Arg Asn Lys Val
85 90 95

Phe Ala Lys Leu His His Asn Met Gln Thr Phe Gln Ala Gly Pro His
100 105 110

Ala Val Lys Lys Leu Ser Ser Gly Asn Ser Lys Leu Ser Ser Ser Lys
115 120 125

Phe Ser Asn Pro Ile Ser Ser Ser Lys Arg Asn Val Ser Leu Leu Ile
130 135 140

Ser Ala Asn Ser Gly Leu
145 150

<210> 21
<211> 95
<212> PRT
<213> Homo sapiens

<400> 21

Met Cys Cys Thr Lys Ser Leu Leu Leu Ala Ala Leu Met Ser Val Leu
1 5 10 15

Leu Leu His Leu Cys Gly Glu Ser Glu Ala Ser Asn Phe Asp Cys Cys
20 25 30

Leu Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe Ile Val Gly Phe
35 40 45

Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile Phe
50 55 60

His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr Trp
65 70 75 80

Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met
85 90 95

<210> 22
<211> 94
<212> PRT
<213> Homo sapiens

<400> 22

Met Ala Pro Leu Lys Met Leu Ala Leu Val Thr Leu Leu Leu Gly Ala
1   5   10   15

Ser Leu Gln His Ile His Ala Ala Arg Gly Thr Asn Val Gly Arg Glu
            20   25   30

Cys Cys Leu Glu Tyr Phe Lys Gly Ala Ile Pro Leu Arg Lys Leu Lys
        35   40   45

Thr Trp Tyr Gln Thr Ser Glu Asp Cys Ser Arg Asp Ala Ile Val Phe
    50   55   60

Val Thr Val Gln Gly Arg Ala Ile Cys Ser Asp Pro Asn Asn Gln Arg
65   70   75   80

Val Lys Asn Ala Val Lys Tyr Leu Gln Ser Leu Glu Arg Ser
                85   90

<210> 23
<211> 96
<212> PRT
<213> Homo sapiens

<400> 23

Met Gln Ile Ile Thr Thr Ala Leu Val Cys Leu Leu Leu Ala Gly Met
1   5   10   15

Trp Pro Glu Asp Val Asp Ser Lys Ser Met Gln Val Pro Phe Ser Arg
            20   25   30

Cys Cys Phe Ser Phe Ala Glu Gln Glu Ile Pro Leu Arg Ala Ile Leu
        35   40   45

Cys Tyr Arg Asn Thr Ser Ser Ile Cys Ser Asn Glu Gly Leu Ile Phe
    50   55   60

Lys Leu Lys Arg Gly Lys Glu Ala Cys Ala Leu Asp Thr Val Gly Trp
65   70   75   80

Val Gln Arg His Arg Lys Met Leu Arg His Cys Pro Ser Lys Arg Lys
                85   90   95

<210> 24
<211> 77
<212> PRT
<213> Homo sapiens

<400> 24

Ala Gln Pro Asp Ser Val Ser Ile Pro Ile Thr Cys Cys Phe Asn Val
1   5   10   15

Ile Asn Arg Lys Ile Pro Ile Gln Arg Leu Glu Ser Tyr Thr Arg Ile
            20   25   30

Thr Asn Ile Gln Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Lys Arg
        35   40   45

Gly Lys Glu Val Cys Ala Asp Pro Lys Glu Arg Trp Val Arg Asp Ser
    50   55   60

Met Lys His Leu Asp Gln Ile Phe Gln Asn Leu Lys Pro
65   70   75

<210> 25
<211> 98
<212> PRT
<213> Homo sapiens

<400> 25

Met Lys Val Ser Ala Val Leu Leu Cys Leu Leu Leu Met Thr Ala Ala
1   5   10   15

Phe Asn Pro Gln Gly Leu Ala Gln Pro Asp Ala Leu Asn Val Pro Ser
            20   25   30

Thr Cys Cys Phe Thr Phe Ser Ser Lys Lys Ile Ser Leu Gln Arg Leu
        35   40   45

Lys Ser Tyr Val Ile Thr Thr Ser Arg Cys Pro Gln Lys Ala Val Ile
    50   55   60

Phe Arg Thr Lys Leu Gly Lys Glu Ile Cys Ala Asp Pro Lys Glu Lys
65   70   75   80

Trp Val Gln Asn Tyr Met Lys His Leu Gly Arg Lys Ala His Thr Leu
                85   90   95

Lys Thr

<210> 26
<211> 97
<212> PRT
<213> Homo sapiens

<400> 26

Met Lys Val Ser Ala Ala Leu Leu Trp Leu Leu Leu Ile Ala Ala Ala
1 5 10 15

Phe Ser Pro Gln Gly Leu Ala Gly Pro Ala Ser Val Pro Thr Thr Cys
20 25 30

Cys Phe Asn Leu Ala Asn Arg Lys Ile Pro Leu Gln Arg Leu Glu Ser
35 40 45

Tyr Arg Arg Ile Thr Ser Gly Lys Cys Pro Gln Lys Ala Val Ile Phe
50 55 60

Lys Thr Lys Leu Ala Lys Asp Ile Cys Ala Asp Pro Lys Lys Lys Trp
65 70 75 80

Val Gln Asp Ser Met Lys Tyr Leu Asp Gln Lys Ser Pro Thr Pro Lys
85 90 95

Pro

<210> 27
<211> 99
<212> PRT
<213> Homo sapiens

<400> 27

Met Lys Ala Ser Ala Ala Leu Leu Cys Leu Leu Leu Thr Ala Ala Ala
1 5 10 15

Phe Ser Pro Gln Gly Leu Ala Gln Pro Val Gly Ile Asn Thr Ser Thr
20 25 30

Thr Cys Cys Tyr Arg Phe Ile Asn Lys Lys Ile Pro Lys Gln Arg Leu
35 40 45

Glu Ser Tyr Arg Arg Thr Thr Ser Ser His Cys Pro Arg Glu Ala Val
50 55 60

Ile Phe Lys Thr Lys Leu Asp Lys Glu Asp Cys Ala Asp Pro Thr Gln
65 70 75 80

Lys Trp Val Gln Asp Pro Met Lys His Leu Asp Lys Lys Thr Gln Thr
85 90 95

Pro Lys Leu

<210> 28
<211> 99
<212> PRT
<213> Homo sapiens

<400> 28

Met Lys Val Ser Ala Ala Leu Leu Cys Leu Leu Leu Thr Ala Ala Ala
1   5   10   15

Phe Ile Pro Gln Gly Leu Ala Gln Pro Asp Ala Ile Asn Ala Pro Val
            20   25   30

Thr Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu
        35   40   45

Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val
    50   55   60

Ile Phe Lys Thr Ile Val Ala Lys Glu Asp Cys Ala Asp Pro Lys Gln
65   70   75   80

Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr
                85   90   95

Pro Lys Thr

<210> 29
<211> 91
<212> PRT
<213> Homo sapiens

<400> 29

Met Lys Val Ser Ala Ala Arg Leu Ala Val Ile Leu Ile Ala Thr Ala
1   5   10   15

Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
            20   25   30

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
        35   40   45

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe
    50   55   60

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
65   70   75   80

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
85 90

<210> 30
<211> 93
<212> PRT
<213> Homo sapiens

<400> 30

Met Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile
1 5 10 15

Ala Leu Gly Thr Lys Thr Glu Ser Ser Ser Arg Gly Pro Tyr His Pro
20 25 30

Ser Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg
35 40 45

Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile
50 55 60

Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp
65 70 75 80

Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn
85 90

<210> 31
<211> 92
<212> PRT
<213> Homo sapiens

<400> 31

Met Lys Leu Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala
1 5 10 15

Phe Cys Ser Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr
20 25 30

Ala Cys Cys Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val
35 40 45

Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val
50 55 60

Phe Gln Thr Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser
65 70 75 80

Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu Asn
85 90

<210> 32
<211> 93
<212> PRT
<213> Homo sapiens

<400> 32

Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala
1 5 10 15

Leu Cys Asn Gln Val Leu Ser Ala Pro Leu Ala Ala Asp Thr Pro Thr
20 25 30

Ala Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile
35 40 45

Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Ser Val Ile
50 55 60

Phe Leu Thr Lys Arg Gly Arg Gln Val Cys Ala Asp Pro Ser Glu Glu
65 70 75 80

Trp Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala
85 90

<210> 33
<211> 92
<212> PRT
<213> Homo sapiens

<400> 33

Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala
1 5 10 15

Leu Cys Asn Gln Phe Ser Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala
20 25 30

Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala
35 40 45

Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val Ile Phe
50 55 60

Leu Thr Lys Arg Ser Arg Gln Val Cys Ala Asp Pro Ser Glu Glu Trp
65 70 75 80

Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala
85 90

<210> 34
<211> 89
<212> PRT
<213> Homo sapiens

<400> 34

Met Lys Gly Leu Ala Ala Ala Leu Leu Val Leu Val Cys Thr Met Ala
1 5 10 15

Leu Cys Ser Cys Ala Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu
20 25 30

Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser
35 40 45

Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys
50 55 60

Arg Gly Arg Gln Asp Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys
65 70 75 80

Tyr Ile Ser Asp Leu Lys Leu Asn Ala
85

<210> 35
<211> 104
<212> DNA
<213> Homo sapiens

<400> 35
acacgaattc acgtaggaaa ttcttaacca aaaacattaa acctgaattt gatcacaaga 60

aaataattag gccaggcact gtggctcaca cctataatcc cagt 104